

## WHAT IS CLAIMED IS:

*Sub A#*  
*C1*

1. A method of changing the program of each node constituting a network in a remote place, wherein the network having at least two nodes and a network management system (NMS) coupled to a predetermined node, the method comprising the steps of:

5 (a) transmitting a new program data and a control signal to the predetermined node coupled to the network management system (NMS), the control signal being adapted to change the program of the predetermined node;

(b) allocating a fixed region in a memory within the predetermined node in response to the reception of the new program data, storing the received new program data in the  
10 allocated fixed region, and replacing the program of the predetermined node with the new program data responsive to the control signal;

(c) allowing the network management system(NMS) to transmit a program-transmitting signal to the predetermined node for transmitting the stored new program data to a next predetermined node, and transmitting the control signal to the next predetermined node  
15 by the network management system (NMS); and,

(d) in response to the program-transmitting signal, allowing the predetermined node to transmit the stored new program data thereof to the next predetermined node.

2. The method as set forth in Claim 1, wherein the method further comprising  
20 the step of (e) replacing the program of the next predetermined node with the new program data received from the predetermined node responsive to the control signal.

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3. The method as set forth in Claim 2, wherein said nodes are arranged in a straight line or a loop in said network.

4. A method for changing the program in a plurality of nodes arranged in a remote area within a network, the method comprising the steps of:

(a) transmitting a new program data and a control signal to a first node coupled to a network management system (NMS);

5 (b) changing the program of said first node to said new program data under the control of said control signal,

(c) storing said new program data in a memory means of said first node;

10 (d) transmitting, by said NMS, a command signal to said first node to transmit said stored new program data to a second node and transmitting said control signal to said second node; and,

(e) upon receiving said stored new program data from said first node, changing the program of said second node to said new program data (under the control of said control signal.)

15 5. The method as set forth in Claim 4, wherein said plurality of said nodes is arranged in a straight line or a loop in said network.

6. The method as set forth in Claim 4, wherein said method further comprising the steps of:

(f) storing said new program data received from said first node in a memory means of said second node;

(g) transmitting, by said NMS, said command signal to said second node to transmit said stored new program data in said second node to a remainder node and transmitting said control signal to said remainder node; and,

(h) upon receiving said stored new program data from said second node, changing the program of said remainder node to said new program data under the control of said control signal.

7. The method as set forth in Claim 4, wherein said method further comprising the step of repeating said steps (c), (d), and (e) for changing the program in the remainder nodes arranged in said network. *can*

8. A method for changing the program of a plurality of nodes arranged in a remote area within a network, said network having a network management system (NMS) coupled to one of said plurality of nodes, the method comprising the steps of:

(a) transmitting a new program data and a control signal to said one node coupled to said network management system (NMS);

(b) storing said new program data in a memory means of said one node;

(c) changing the program of said one node to said new program data under the control of said control signal;

(d) transmitting, by said NMS, a command signal to said one node to transmit said stored new program data to said other node arranged in said network and transmitting said control signal to said other node; and,

(e) upon receiving said stored new program data, changing the program of said other node to said new program data under the control of said control signal.

9. The method as set forth in Claim 8, wherein said method further comprising the step of repeating said step (b), (c), (d) and (e) for changing the program in the remainder nodes arranged in said network. *ms*

10. The method as set forth in Claim 8, wherein said method further comprising the steps of:

(f) transmitting, by said NMS, said command signal to transmit said stored new program data in said other node to a remainder node and transmitting said control signal to said remainder node;

(g) in response to said command signal, storing said new program data from other said node in a memory means of said remainder node;

(h) upon receiving said stored new program data from said other node, changing the program of said remainder node to said new program data under the control of said control signal.

method as seen in the figure or a loop